

## Supporting the Plus4 and C16 computers

## Welcome

Welcome to issue 78 of Newspug, the journal of Plus4 and C16 computing. This issue will have a strong bias to those things the C16/+4 computers do well such as colour graphic effects and easy bitmap graphics programming.

Just a few words about myself now. I bought my trusty C16 back in 1985 (my first computer), and recently purchased a Plus4 from Korella Trading. Even though I now own other machines as well, I still use the C16 and Plus4 machines when the opportunity arises. The Plus4 remains one of the most user-friendly home computers ever made.

## Publications

At least two U.S. publications supporting the Plus4 are available. Cee-64 Alive (soon to be renamed "Commodore Cee") caters for all Commodore 8-bit machines. Although mainly a C64/128 disk mag it intends to increase its already large Plus4 coverage over the coming months, including an occasional "Plus4 only" disk.

Cee-64 Alive consists of two or three double sided disks per issue, six issues per year and is produced under licence in Australia by Commodore Network. A yearly subscription costs

AU\$35. The sample disk costs AU\$4.  
Send cheque or Postal money orders to:  
**Commodore Network**  
9 Wadswon St. Cobram VIC 3644

DieHard is the other Commodore 8-bit publication which supports the Plus4. It's a newstand magazine, and one issue, celebrating the plus4's birthday, featured the machine on their front cover. All subscription enquiries should be directed to:

**dieHard**  
P.O. Box 392  
Boise, ID 83701-0392  
United States of America

Issue = 78 March 1995

'3D PLOT'  
From the book 'Commodore 16/Plus4 Companion'

```

10 GRAPHIC 3,1:COLOR 3,2,7
20 A = 80:B = A/A:C = 100:D = 100
30 FOR X = 0 TO A
40 S = X*X
50 P = SQR(B - S)
60 I = -P
70 R = SQR(S + (R*I)/A)
80 Q = (R-I) * SIN(24*PI)

```

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[illegible]

### ACCESSORIES FOR C-16 & +4

[illegible]

## C16 &amp; +4 BOOKS &amp; MAGAZINES

[illegible]

## Software Sources

There will be a number of Plus4 and C16 dealers. Korella Trading, a Computer Shop in Belmont, New South Wales, run by a Plus4 enthusiast who ensures there is always plenty of software and hardware available. On my last visit to Korella I managed to pick up some old British club newsletters, parts of which I'll reproduce in Newsplug. I also bought a tape to disk copier, so can now offer a service to those who want to put their copy-protected tape games onto disk. Korella has a number of refurbished Plus4s and power supplies available, several dozen games titles as well as some excellent serious programs, including three or four boxed, almost new, Script/Plus cartridge-based wordprocessors. In addition to software and hardware the shop also offers a repair service. I'll endeavour to print Korella's Plus4/C16 catalogue next issue. Korella has probably the largest (and probably the ONLY) range of Plus4 hardware and software in Australia and can be contacted on (049) 45 8455. The shop also supports the C64 in a BIG way, as well as the VIC-20 (!), Atari 2600, 7800, XL/XE,

ST, Amiga, CD-32, IBM PC and the Nintendo game systems.

Looking overseas now, there are a number of British firms still selling software:

Ultra Software  
Fulling Mill, Broughton, Banbury,  
Oxon, OX15 6AP  
Advertises the following C16/Plus4  
games: Beach head, Championship  
Wrestling, Classics 3, Football

### "Korella has probably the largest range of Plus4 hardware and software in Australia"

manager, Gold (2 games pack),  
Harbour Attack, Ikari Warriors and  
Skyhawk.

DTBS  
18 Norwich Ave, Rochdale, Lancs,  
OL11 5JZ  
Phone/Fax: 0706 715 028  
Has a range of good C16/Plus4  
commercial software.

Capri Marketing (Trading under the

name "Computer Cavern")  
9 Dean St, Marlow, Bucks, SL7  
3AA.

Tel: 0628 891 101  
This is a chain of specialist  
computer shops which specialise in  
software for the less popular computers  
such as the C16/Plus 4, VIC 20, Oric,  
TRS-80, ZX80 and ZX81,  
MSX-series, ZX Spectrum, Sinclair  
QL, Commodore PET, and just about  
every other orphaned computer in  
existence.

Don't forget these other sources of  
hardware and software such as garage  
sales and used equipment stores such as  
Cash Converters. C16s, and to a lesser  
extent Plus4s, sold well here in  
Australia, and there must be a lot of  
(sadly) unwanted systems lying around.  
Try contacting the various distributors  
and warehouses, as sometimes old  
stock gets deleted from an inventory  
but remains in the warehouse. A good  
example of this happening is where just  
a few months ago a number of brand  
new, still boxed, Commodore PETs  
were discovered in a Queensland  
warehouse, they had been overlooked  
for nearly fifteen years! Another

potential source of old computer  
systems is your local landfill tip,  
where many computers considered  
obsolete and therefore of no  
commercial value end up. As it's illegal  
to do private salvaging at tips, you  
should contact the licenced salvagers  
(your local council can help) and ask if

### "...Commodore PETs were discovered in a Queensland warehouse"

they can keep an eye out for computer  
related material. About one year ago a  
local business dumped a dozen fully  
working PET systems (including 4040  
drives) at our local tip. Sadly they were  
ploughed under before they could be  
rescued.



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```
90 Y = 1/3 * Q * D
100 IF I = .P THEN M = Y:GOTO 130
110 IF Y > M THEN M = Y:GOTO 140
120 IF Y > N THEN GOTO 170
130 N = Y
140 Y = C * Y
150 DRAW 3,A * X,Y
160 DRAW 3,A * X,Y
170 I = I + 4
180 IF I < P THEN GO TO 150
190 NEXT X
200 FOR C = 2 TO 15:FOR I = 0 TO 7:COLOR 3,C,1
210 FOR M = 0 TO 100:NEXT M,1,C
220 GOTO 200
```

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\*STRING PATTERN\*  
From the book "100 Programs for the C16"

```
10 REM STRING PATTERN
20 REM *****
30 REM
40 COLOR 0,1:REM BLACK SCREEN
50 COLOR 1,4,5:REM CYAN INK
60 COLOR 4,1:REM BLACK BORDER
70 REM *****
80 FOR N = 0 TO 3
90: DO
```

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## Book Reviews

There have been many books produced for the Plus4 and C16. Among the better titles are the ones from Melbourne House and Sunshine Books. These include "C16 machine Language for the Absolute Beginner", "Commodore 16 Exposed", C16 Games Book", "Commodore 16 Sound & Graphics", "6502 Reference Guide", and "The Commodore Plus4/C16 Companion". Another excellent book is "100 Programs for the Commodore 16" published by Prentice-Hall. There is one book though I'd recommend steering well clear of unless it's free, and that's Commodore's official "Plus4 & C16 Programmers' Reference Guide". This thin, ringbound collection of photocopied notes looks rushed, as if it was done in a hurry by a Commodore employee during his lunch break. Most of the "book" contains padding such as ascii/screencode tables, explanation of BASIC commands and math conversion tables. On the bright side, the book does contain schematics of both machines, and the chapter on machine code has a full explanation of the built-in machine code monitor, as well as a useful

Blatant plug (pun intended) alert!  
If you also use a C64 or C128 then why not subscribe to Australia's premier 64/128 magazine "Commodore Network". Contact Warren Baismith at 9 Wadson St, Cobram, VIC 3644.

memory map. Anyone wanting a decent Reference Guide would be well advised to hunt down a copy of Anco's excellent unofficial "C16/Plus4 Reference Guide".

When I bought Sunshine Books' "C16/Plus4 Companion" inside it was a copy of Sunshine's original press release. Somewhere in this issue there'll be a reproduction of it.

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```
100: SCNCLR
110: IF N=1 OR N=3 THEN M$="END":ELSE M$="START"
120: PRINT M$: POINT OF LINE':1+INT(N/2)
130: INPUT 'X-COORDINATE (0 TO 319)':X(N)
140: LOOP UNTIL X(N)>=1 AND X(N)<320
150: REM*****
160: DO
170: SCNCLR
180: PRINT M$: POINT OF LINE':1+INT(N/2)
190: INPUT 'Y-COORDINATE (0 TO 199)':Y(N)
200: LOOP UNTIL Y(N)>=1 AND Y(N)<200
210 NEXT
```

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## Plus4 Activity Sheet

There are many ways to keep your Plus4 or C16 from gathering dust in the cupboard.

1. Use it as an almost portable wordprocessing system. Replace the 3+1 ROM with a Script/Plus ROM, get hold of a decent centronics printer interface and a cheap, portable printer (Canon bubbly-jet?). If you cannot obtain an interface that draws its power from the printer, such as the Micrographics MW-350, then use a standard C64/128 interface that gets power from the cassette port's 5-volt line (such as the Xetec Super Grafix) in conjunction with a C16 to C64 cassette plug adaptor. Most (but not all) printers supply a 5-volt output from pin 18 so a hardware hack with the Super Grafix shouldn't be too difficult. Include a small, light drive such as the 1541 MkII or 1581, or better still, an FD-4000. Finally, stick the whole lot into a suitcase next time you go on holidays or a business trip, and hook it up to the nearest telly when you need to type up a few pages.

2. Have fun programming in

BASIC. BASIC V3.5 is one of the best BASICs available. Unlike the C64, it's easy to write 3-D routines for the Plus4, as well as advanced text and string manipulation. Every now and then just set yourself a target, and go for it! Recreational programming can be fun.

3. Be proud to be a member of a proud, dogmatic minority. Millions of people around the world belong to minority groups, and now is YOUR chance. Minority groups enjoy lobbying parliament for changes to help their causes, so why not have some fun blockading Parliament House in Canberra like the loggers did last month, but don't park a truck on the road, use a Plus4. Another advantage of being in a minority group such as us Plus4 users are, is the ability to make up amazing slogans and poems at the drop of a hat, as well as pretty cool face-paintings, yes, the Plus4 can bring out the artist in us all. The media has always been kind to minority groups, especially those who are downtrodden, sneered at, and thought of as an anachronism by the general populace, and what

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```
220 DO
230 : SCNCLR
240 : INPUT 'NUMBER OF POINTS PER LINE':N
250 LOOP UNTIL N>0
260 REM*****
270 REM PREVENT DIVISION BY ZERO
280 IF X(0)*X(1) THEN X(1)=X(1)+1
290 IF X(2)*X(3) THEN X(3)=X(3)+1
300 REM*****
```

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better media is there than TELEVISION, in particular, SBS TV. Phone up SBS' Special Projects manager and give her a sob-story, straight from the heart, about the terror and indignity us pluggers suffer at the hands of arrogant PC owners, the rejection at the hands of greedy software producers, and the laughter from ill-advised Mac-owning upstarts. Do this and you're guaranteed to have a badly produced five minute film of Plus4 inspired street theatre appearing at 2am on Monday mornings every week for the next two years.

4. Get Into the home-made jewellery business. Plus4s have an abundance of ferrite beads clustered around the I/O ports, and these unusual objects would make a rather fetching necklace or bracelet. In addition to giving the wearer immunity to cancer-causing electromagnetic radiation, and almost superhuman strength. Probably.

I hope you enjoyed this, but I'm tired and 'Star Trek: Deep Space Nine' has started. Hope I

didn't offend anyone with those last two points. Bye.



You've now come to the end of this issue. Due to time pressures I cannot produce Newsplug every month, so Newsplug will come out every two or three months. Next issue will hopefully have some articles on new German hardware and software, and perhaps some 3 dimensional vector routines to try out.

Please let me know if there are any other computers that you'd like to see covered, such as the C128, Amiga or PC, and I'll see what I can do.

Newsplug was created using a RAM expanded C64 equipped with geoPublish and geoWrite, and printed on a Canon Bubble Jet printer.

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```

310 REM CALCULATE PARAMETERS
320 D1 = (X%(1)-X%(0)) / K%
330 D2 = (X%(3)-X%(2)) / K%
340 M1 = (Y%(1)-Y%(0)) / (X%(1)-X%(0))
350 M2 = (Y%(3)-Y%(2)) / (X%(3)-X%(2))
360 R1 = Y%(0) - M1*X%(0)
370 R2 = Y%(2) - M2*X%(2)
380 REM*****

```

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### PRERELEASE

\*\*\*\*\* CONFIDENTIAL \*\*\*\*\*

Author: Brian Lewis

Presentation Date: 5 December 1994 Presentation: CISC and RISC

- Selling Points:**
- First introduction to the new machine
  - Computer model 20,000 Series at the CISC, Uniflex
  - CISC/Uniflex Computer architecture
  - Model 20,000 Series, for the complete beginner to modeling

The Point: This book has been written with the purpose of giving you a guide to the CISC/Uniflex model and computer architecture.

The author has given you a guide to the CISC/Uniflex model and computer architecture. The author has given you a guide to the CISC/Uniflex model and computer architecture. The author has given you a guide to the CISC/Uniflex model and computer architecture.

This book follows the well-known method of teaching RISC and has been written by a professional author, the author of the book, the author of the book, the author of the book.

Contents:

The author has given you a guide to the CISC/Uniflex model and computer architecture.

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```

390 REM DRAW PATTERN
400 GRAPHIC 1,1
410 DRAW 1,X%(0),Y%(0) TO X%(1),Y%(1)
420 DRAW 1,X%(2),Y%(2) TO X%(3),Y%(3)
430 FOR N = 1 TO K%
440 : R1 = X%(0) + N*D1
450 : S1 = M1 * [X%(0) + N*D1] + B1
460 : R2 = X%(3) + N*D2
470 : S2 = M2 * [X%(3) + N*D2] + B2
480 : DRAW 1,R1,S1 TO R2,S2
490 NEXT
500 GETKEY AS : REM ANY KEY TO END
510 GRAPHIC CLR
520 SCNCLR
530 END

```